



## Anti-MBD2/MBD3 Antibody (Clone ABM14A8)

**Alternative Names:** MBD2, MBD3, Methyl-CpG-Binding Domain Protein 3, Methyl-CpG-Binding Domain Protein 2, NuRD complex, nucleosome remodelling and deacetylation complex

**Catalogue Number:** AA17-10028-100ug

**Size:** 100 µg

### Background Information

MBD2 and MBD3 are non-enzymatic subunits of the NuRD (nucleosome remodelling and deacetylation) complex. MBD2 and MBD3 are close relatives and probably descend via gene duplication from an ancestral MBD2/MBD3, that is present in some metazoans as for instance *Caenorhabditis elegans* and *Drosophila*. Outside the MBD domain, MBD2 and MBD3 share almost 80% homology; they both have an MBD and a coiled-coil domain (CC). Apart from this common domain, MBD2 contains an additional N-terminal glycine-arginine (GR) rich domain and a transcriptional repressor domain (TRD), whereas MBD3 has a C-terminal poly-glutamate region. Three isoforms have been described for MBD2 protein: the full length MBD2a, MBD2b lacking the N-terminal GR repeat and MBD2c that is a testis specific isoform lacking the C-terminus. Also MBD3 presents three isoforms: Mbd3b – the major isoform in embryonic stem cells, Mbd3a and a smaller isoform Mbd3c. The crucial difference between MBD2 and MBD3 is that MBD3 does not bind methylated DNA, because it lacks four conserved amino acids in the MBD domain.

### Product Information

<b>Antibody Type:</b>	Monoclonal	<b>Host:</b>	Mouse
<b>Isotype:</b>	IgG1 kappa	<b>Species Reactivity:</b>	Human
<b>Immunogen:</b>	Full length recombinant human MBD3		
<b>Format:</b>	100 µg in 200 µl PBS containing 0.05% BSA and 0.05% sodium azide.		
<b>Storage Conditions:</b>	6 months: 4°C. Long-term storage: -20°C. Avoid multiple freeze and thaw cycles.		
<b>Applications:</b>	IHC   FACS   WB WB: 2-4 ug/ml, Immunohistochemical analysis: 5 ug/ml, FACS analysis: 0.5 ug/10 <sup>6</sup> cells		

### Additional Information

<b>Subcellular location:</b>	Nucleus	<b>MW:</b>	33kDa (intended as a general guide and does not allow for all isoforms and species variations)
<b>Gene ID</b>	53615	<b>Uniprot ID:</b>	O95983



## References

(Menafrà R, Stunnenberg HG. MBD2 and MBD3: elusive functions and mechanisms. *Frontiers in Genetics*. 2014;5:428. doi:10.3389/fgene.2014.00428.)